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Generalized Intelligent Framework for Tutoring (GIFT) Cloud/Virtual Open Campus Quick-Start Guide (Revision 1)

prepared by Scott Ososky
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14. ABSTRACT
This document serves as the quick-start guide for GIFT Cloud, the web-based application version of the Generalized Intelligent Framework for Tutoring (GIFT). GIFT is a modular, open-source framework for building, deploying, and managing adaptive training content. GIFT Cloud allows learners, authors, and researchers to access GIFT without downloading and installing software on a desktop or laptop computer. The purpose of this document is to provide an overview of the primary interfaces and basic functions of GIFT Cloud. Topics include establishing a GIFT Account, taking courses on GIFT Cloud, orienting the user to GIFT's authoring tools, and locating resources and providing feedback on GIFT Cloud. This document serves as a revision to ARL-CR-0796, to reflect recent developments to GIFT interfaces, processes, and terminology.

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1.   Introduction

Thank you for visiting the Generalized Intelligent Framework for Tutoring (GIFT) Cloud/Virtual Open Campus. The purpose of this quick-start guide is to provide an overview of the primary interfaces and basic functions of GIFT.

GIFT is a modular, open-source framework for building, deploying, and managing adaptive training content. This software has the ability to incorporate various external hardware and software components to, for example, model attributes about the learner, tailor instruction to learners' needs, and allow learners to practice their knowledge in various external applications. GIFT is available to users with a GIFT Account at no cost.

GIFT Cloud is an implementation of GIFT. This web-based application allows learners, authors, and researchers to access GIFT without downloading and installing the GIFT software on a desktop or laptop computer.

This quick-start guide is written specifically for the Alpha release of GIFT Cloud, though some of the information in this document is also relevant to GIFT Local (running in Desktop Mode).

What is an Alpha release?

GIFT Virtual Open Campus is in active development, so you might encounter software bugs along the way. We invite you to help shape the future of GIFT development by submitting your feedback on our forums at https://gifttutoring.org.

Revision to previous Quick Start Guide

This document serves as a revision to ARL-CR-0796,[1] to reflect recent developments to GIFT Cloud interfaces, processes, and terminology.

The Fine Print

GIFT is available to users with a GIFT Account at no cost. For more information about the ways in which GIFT can be used, please see the End User License Agreement located at https://gifttutoring.org/projects/gift/wiki/Gift_eula.

2.   What is GIFT Cloud/Virtual Open Campus?

This online version of GIFT (Fig. 1) allows users to develop adaptive tutoring courses in a server environment without downloading the GIFT software. Courses can be imported from and exported to GIFT Local (the downloadable version of GIFT) as desired. Additionally, GIFT Cloud allows users to upload course materials to their online workspaces for inclusion in GIFT Courses. GIFT Cloud is located at https://cloud.gifttutoring.org.
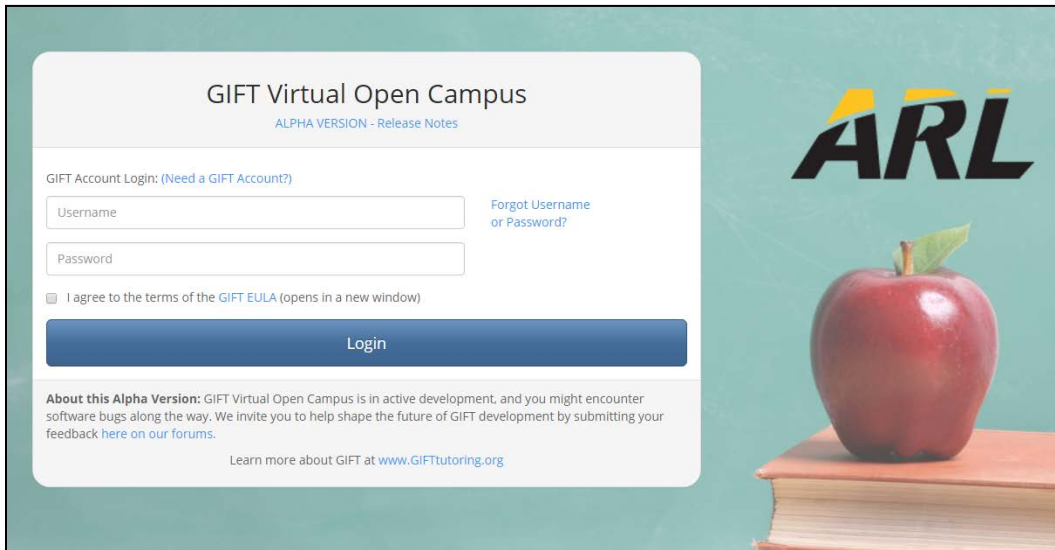

Fig. 1   GIFT Cloud/Virtual Open Campus log-in page

What is GIFT Local?

GIFT Local is the version of GIFT that is downloaded and installed to a Windows laptop or desktop computer. GIFT Local in Desktop Mode is very similar to GIFT Cloud; however, the former also contains advanced features and options for more advanced users. There you will find support for various sensors, administrative monitoring tools, and documentation for developers. GIFT Local is available from https://gifttutoring.org in the Downloads section.

3.   Requirements for GIFT Cloud

GIFT Cloud is accessed via a web browser. Officially, GIFT Cloud has been tested to work on Windows 7, with Internet Explorer 11 and Google Chrome, respectively. Other operating systems and browsers are currently being evaluated for compatibility with GIFT Cloud.

3.1 Running Courses with External Applications

GIFT is a framework designed to interact with various software, referred to as "external applications" in GIFT. The external application that a learner is most likely to encounter as a GIFT Course is Microsoft PowerPoint. That application is also featured in many of the demonstration courses on GIFT Cloud (e.g., Logic Puzzle Tutorial, Hemorrhage Control, and COIN Auto Tutor Session Example). Currently, GIFT Cloud has been tested to work with PowerPoint 2007 and in most cases has been found to work with PowerPoint 2010 and PowerPoint 2013 (32-bit version).

Additionally, GIFT Cloud uses a Gateway component as an interface between the browser and your local programs (when required by GIFT Courses). To run a course on GIFT Cloud that incorporates an external application (i.e., local program on your computer), Java is required. It is recommended that your computer is updated to the latest version of Java before running GIFT Courses that require external applications. Java can be downloaded and installed at no cost by visiting http://www.java.com.

3.2 Running Courses and Experiments with GIFT

Clicking on the "course details" icon under each "course tile" (detailed in Section 5) will indicate if any additional external programs are required. The course authoring tool (i.e., Course Creator) and My Research have no software requirements beyond a web browser.

4.   Accessing GIFT with a GIFT Account

A GIFT Account is required to access GIFT Cloud/Virtual Open Campus. The GIFT Account allows users to log into GIFT Cloud, manage their personal storage in GIFT Cloud, download GIFT Local, and access resources, including news, publications, and our support forums. GIFT Accounts can be created on the GIFT portal located at https://gifttutoring.org (Fig. 2).

Fig. 2   GIFT Accounts are created on the GIFT Portal

More about GIFT Accounts

We also use the contact information provided in the GIFT Account to notify users of new GIFT features, planned maintenance to GIFT Cloud, and GIFT-relevant publications and events. These emails are infrequent. The GIFT team will not spam your email box or sell your information to a third party. The GIFT Accounts are used only for informational purposes and to support the best experience possible when interacting with GIFT Local, with GIFT Cloud, and on the GIFT Portal.

5.   Taking Courses from Take a Course

Start exploring the features of GIFT Cloud by logging into the home page at https://cloud.gifttutoring.org with your GIFT Account. After a successful sign-in, the default page displayed is My Courses (Fig. 3).
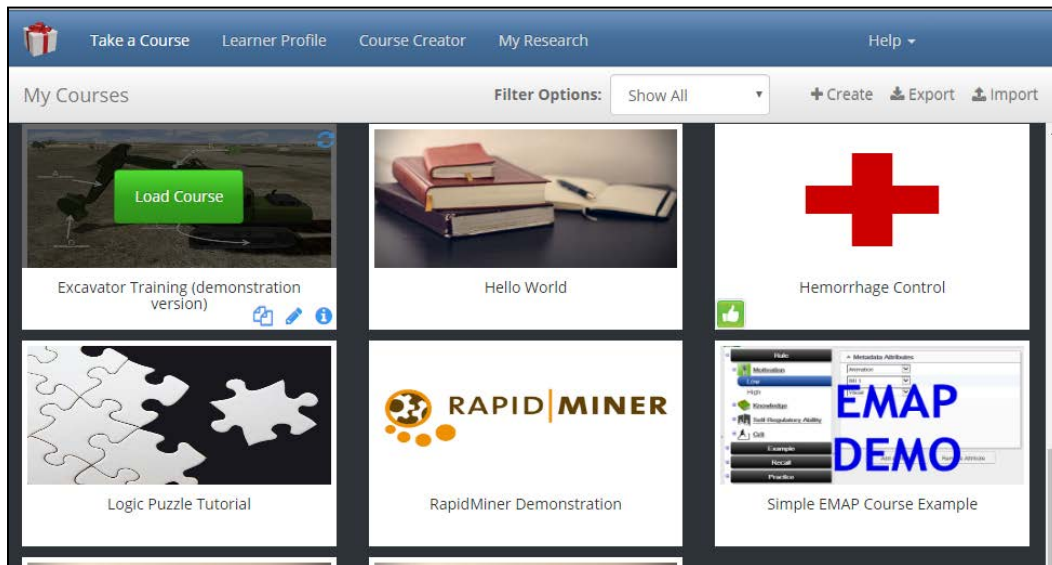

Fig. 3   Courses available to take or inspect are shown as tiles in Take a Course

Learner Profile displays a list of courses available to the signed-in user for taking or editing. A number of demonstration courses are available to all users by default. Courses are displayed as course tiles.

To see more information about an individual course, move the mouse cursor over the course tile. Load Course begins the process of taking the course. The pencil icon allows the user to edit the course in Course Creator. The Course Details "(*i*)" icon shows additional course details, including any external applications that are required to run the course (found under the Requirements tab).

The links at the top of the interface (blue bar) will navigate to Learner Profile (course history), Course Creator (course authoring and editing), and My Research (using GIFT Courses for research purposes), respectively.

Finally, icons are available in the second-level heading (silver bar) on the right-hand side that will allow a user to create a new course, export a course, or import a course with GIFT Cloud, respectively. Courses can be transferred between GIFT users and/or between GIFT Cloud and GIFT Local using the import/export functions.

6.   Launching Courses in GIFT Cloud with Java

GIFT Cloud has the ability to interact with external programs on your computer as part of a GIFT Course. When used in this manner, these external programs are referred to as external applications in GIFT.

How do I know if I need an external application to run a course?

There is an easy way to determine if a course requires an external application. Go to My Courses and move the mouse over a course tile. Click the (*i*) icon in the bottom left-hand corner of the tile to view Course Details. Click the Requirements tab to view the needed external applications for that course. The most common application used is Microsoft PowerPoint.

Before taking any courses in GIFT Cloud that use external applications, both Java and the external application must be installed on the local computer. Java is available at no cost from www.Java.com. It is recommended that you update Java to the latest version.

For GIFT Cloud to interact with an external application, a small Java file known as a Gateway Module (with extension .jnlp) is downloaded in the browser at course runtime. The learner running the course must manually launch this file and follow the brief instructions to ensure GIFT can connect with the necessary external applications. This file can be launched from the same location in which the user's preferred browser normally displays downloaded files.

The following 2 images illustrate the "gateway" configuration experience in Internet Explorer (Fig. 4) and Google Chrome (Fig. 5), respectively. The Gateway Module file that must be run is indicated by the red arrow in those images.

Fig. 4   Location of downloaded Gateway Module file in Internet Explorer

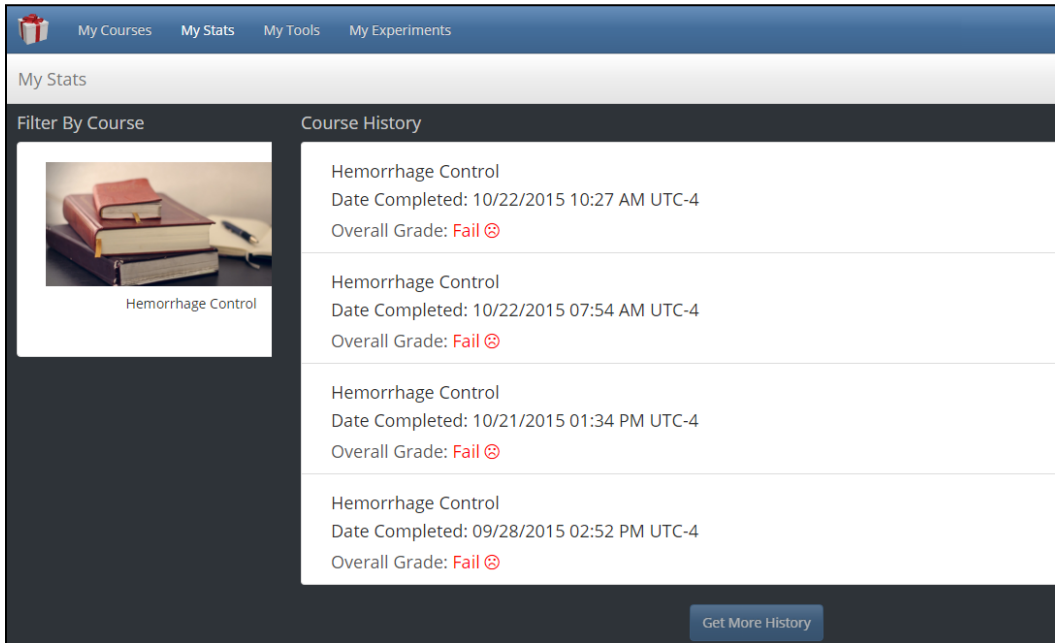**Fig. 5   Location of downloaded Gateway Module file in Google Chrome**

In summary, to run a course in GIFT Cloud that requires an external application the user must first have the application and the latest version of Java installed on the local computer. Then, when the selected course is run, the interface will download a Java file, which the user must manually run to continue with the specific course.

7.   Viewing Course History from Learner Profile

Learner Profile (Fig. 6) displays a record of courses taken by the user that is currently signed in. The most recently taken courses are displayed at the top of the list. Clicking on a row in the Course History will show additional details about that instance in the pop-up scorecard.

Fig. 6   My Stats displays course history for the current user

8. Creating and Editing Courses with Course Creator

Course Creator (Fig. 7) contains the authoring tools and other functions that are used to create and edit GIFT Courses.
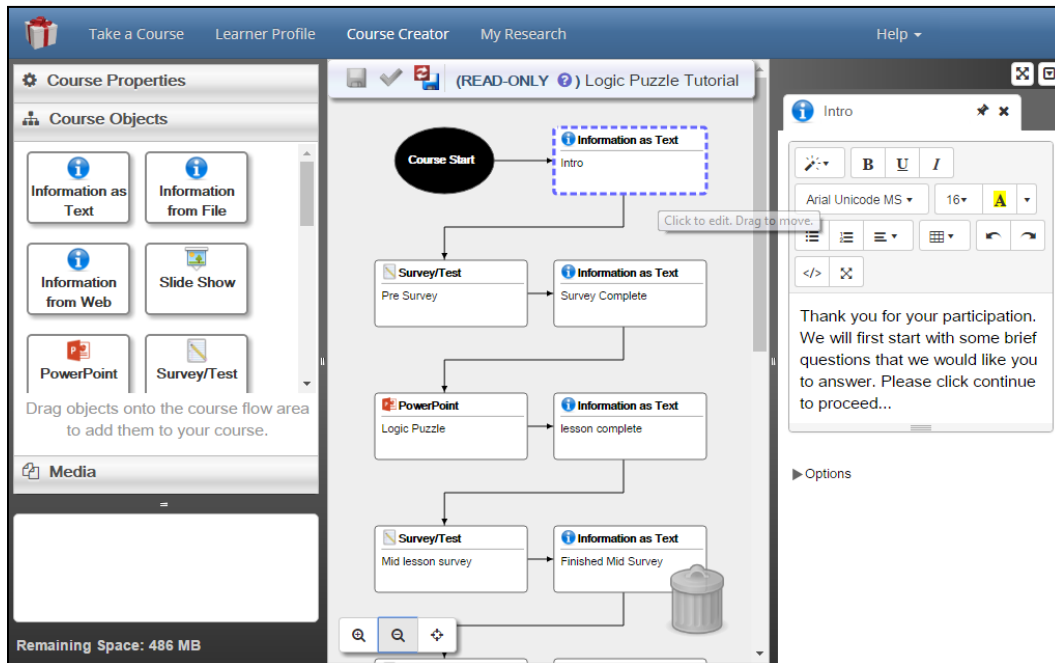
Fig. 7   Default course-authoring view with public Logic Puzzle Tutorial course opened

The workspace is arranged into 3 main sections. The left-hand side of the interface contains course configuration options, the list of "Course Objects" that can be used to build a course, and a media-management section. The middle portion of the interface displays the composition and flow of the currently open course. Course objects can be added from the left-hand side, and objects in the timeline can be arranged via drag-and-drop functionality. The right-hand portion of the interface displays the editor for the currently selected course object. The content in the editors is typically what the learner will see when they take the course.

For additional information about creating courses, and the GIFT architecture, please review the GIFT documentation and visit the forums at https://gifttutoring.org.

9. Creating Survey and Quiz Content

Editing any of the survey-class Course Objects will navigate to the new survey composer (Fig. 8). This is where surveys and question banks are created and/or scored in GIFT.

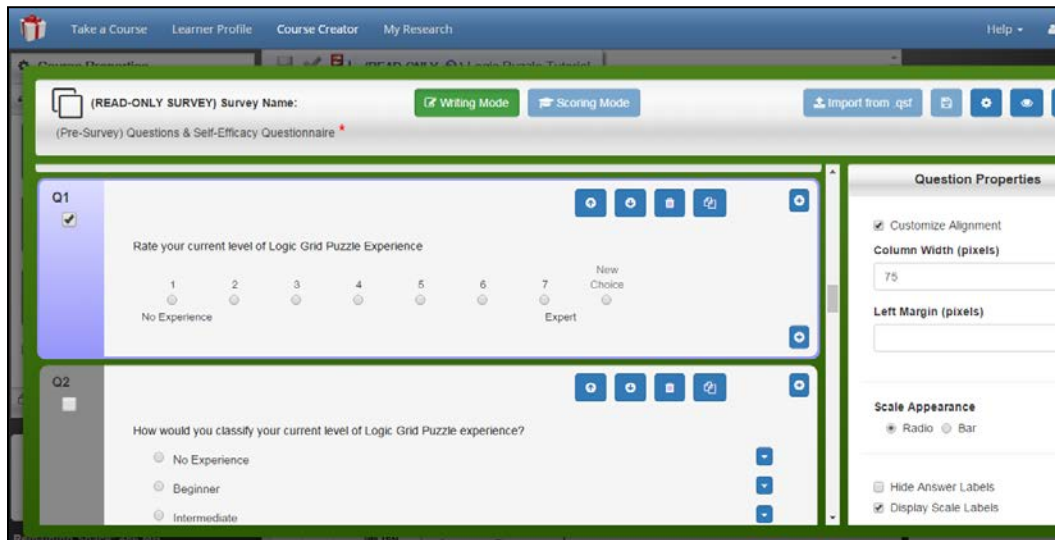**Fig. 8**   **Survey composer interface with an existing survey open**

The survey composer leverages a what-you-see-is-what-you-get (i.e., WYSIWYG) format for quickly viewing the presentation of a survey as it is being created. Configuration options for individual questions are displayed in a panel to the left of the question. GIFT currently supports a number of different question formats; rich-text and images are also supported within surveys. Page breaks and instructional blocks may also be inserted into surveys.

The survey composer is toggled between 2 main modes: Writing Mode and Scoring Mode, found in the middle-top of the interface. Writing Mode is enabled by default. Switching into Scoring Mode will reveal additional fields to assign points to each question response; questions may also be rated for difficulty and associated with course concepts. Quiz scoring options and score-based classification criteria are found at the top of each scored survey in the survey composer.

Finally, GIFT has a capability to import questions from a 3rd-party survey system, Qualtrics, via an export file from that system. Use the "Import from .qsf" button at the top of the survey composer interface to learn more.

For additional information about creating questions and surveys, please review the GIFT documentation and visit the forums at https://gifttutoring.org.

10. Conducting Research with My Research

Clicking on the My Research link will navigate to the experiments page (Fig. 9). The functions on this page are intended to support data collection by leveraging GIFT features within GIFT Courses.
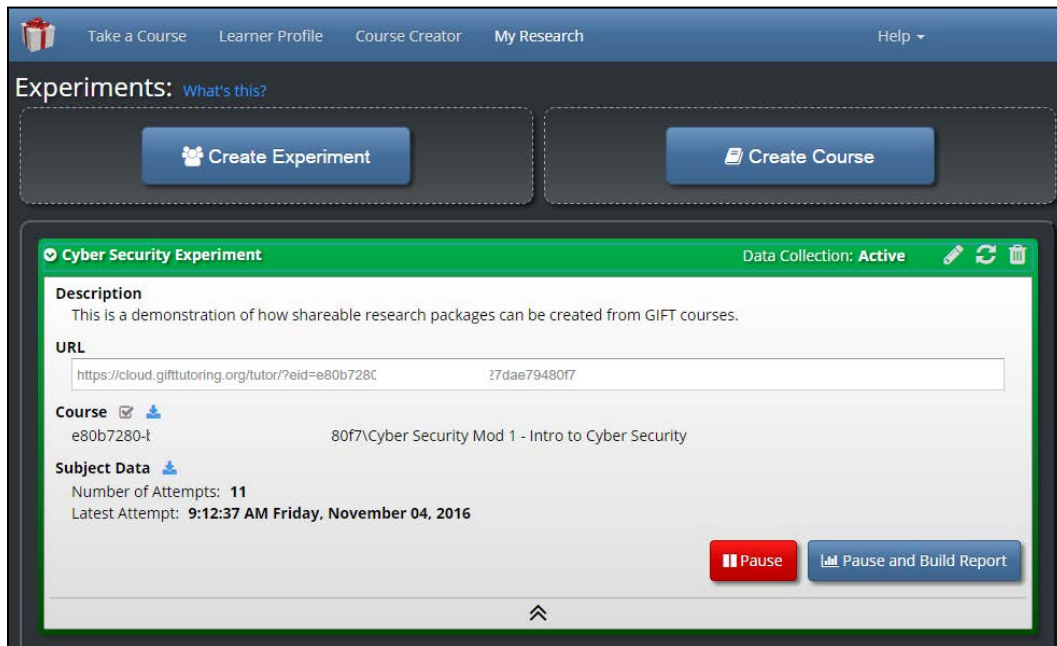
Fig. 9 My Research provides functions that support research using GIFT Courses

Experiments are created from existing GIFT Courses. Creating an experiment will spawn a locked-for-editing "copy" of an existing GIFT Course (for experimental control). Additionally, a unique link to access this experiment is generated upon creation. The link can be shared with participants in the experiment, and participants may interact with an experiment without the need to create or log-in with a GIFT Account.

From this interface, experiments can be paused and resumed to accommodate a data-collection schedule. When an existing experiment in the bottom portion of this interface is clicked, it will provide details of the experiment, including the experiment description, unique access link, course identification, number of participant attempts, and the date and time of the last participant attempt.

The interface also provides a means to customize reports and download data with the "Pause and Build Report" button at the bottom of each experiment.

11. Get More Information and Help

This GIFT quick-start guide covers each of the major GIFT interfaces and provides only a basic overview of GIFT's capabilities.

11.1 Things to Try

The public demonstration courses are a good way to examine how GIFT Courses work. Start by taking some of these courses.

Opening each of these demonstration courses under the Course Creator will provide examples of how GIFT Courses are constructed. For those interested in diving deeper into authoring, those public courses can be copied for individual editing. Also, take some time to explore the survey composer and scoring tools.

Once a couple of courses have been run, examine the course history under Learner Profile to get a sense of the overview information that is generated for the learner record.

Use the tools found within My Research to generate an experiment from an existing GIFT Course and then access the special participant uniform resource locator (URL) that is generated. This should provide a basic example of how an experimental participant's experience with GIFT is different from that of a learner/student.

11.2 How to Get Help

There are many resources available that will provide more information about GIFT. Log into https://gifttutoring.org to access publications related to the theory and implementation of GIFT.

The URL https://gifttutoring.org is also home to our support forums, where users can interact with the development team and the rest of the GIFT user community. The development team actively monitors the forums and regularly responds to forum posts.

Finally, remember that GIFT Cloud is in Alpha under active development. Your feedback will contribute to the development of features and functions that ultimately help users get the most out of GIFT. Thank you for your interest in this project. Join the conversation at https://gifttutoring.org.

12. References

1. Ososky S. Generalized intelligent framework for tutoring (GIFT) cloud/virtual open campus quick-start guide. Aberdeen Proving Ground (MD): Army Research Laboratory (US); 2016 Mar. Report No.: ARL-CR-0796.

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